

REMARKS

This amendment is in response to the Office Action dated mailed October 20, 2006. Reconsideration of the above-identified application in view of the amendments above and the following remarks is respectfully requested.

Claims 1-3, 5-18, 20-46 and 55-57 are currently pending in the application. Claims 16-18 have been allowed. Claims 1-3, 5-15, 33-35, 37-46 and 55-56 have been rejected. Claims 4, 36 and 57 are objected to. Claims 1, 14, 15, 22-24, 33 and 55 are amended herein. Claims 9-10, 19, 41-42, 47-54 and 57 have been canceled.

Claims Objections

Claims 1, 14, 15, 22-24 and 55 are hereby amended in accordance with the Examiner's objections. The claims are believed to now be in an appropriate form for acceptance.

Claims Rejections Under 35 USC 102(b) – Sako (US 6,084,437)

Claims 1-3, 5-15, 33-35 and 37-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Sako (US 6,084,437). The Examiner's rejections are respectfully traversed.

Claim 1 defines a logic circuit which is based upon two complementary transistor networks which connect to logic inputs and outputs as defined by claim 1. The logic circuit is able to implement a wide variety of logic functions, simply by varying the structure of the internal transistor networks. Fig. 1 illustrates such a logic circuit, which is formed from two transistor networks, and having the necessary interconnections between the transistor networks and the logic inputs/outputs.

As shown clearly in Fig. 1, the inner diffusion connection of the p-type transistor network (183) and the inner diffusion connection of the n-type transistor network (193) are connected together to form a common diffusion logic terminal (170). However, the outer diffusion connection of the p-type transistor network (181) and the outer diffusion connection of the n-type transistor network (191) are completely separate

from one another. Thus the p-type transistor network and the n-type transistor network share only a *single common diffusion connection*.

The Examiner states that Sako discloses a p-type transistor network (transistors M1B and M2B of Fig. 17) and an n-type transistor network (transistors M1A and M2A of Fig. 17). However, there is no separation of the outer diffusion terminals of these two transistor networks. In consequence, the circuit configuration disclosed by Sako includes *multiple diffusion connections* which are common to both transistor networks (see diffusion connections A, B and U of Fig. 17).

In order to overcome the rejections of the Examiner, Applicant has chosen to amend independent claims 1 and 33 to explicitly claim a circuit configuration having a single common diffusion connection. Amended claim 1 now reads:

1. (Currently Amended) A complementary logic circuit, comprising:
 - a first logic input;
 - a second logic input;
 - a first dedicated logic terminal;
 - a second dedicated logic terminal;
 - a first logic block comprising:
 - a p-type transistor network for implementing a predetermined logic function, said p-type transistor network comprising a plurality of p-type transistors, and having an outer diffusion connection, a first network gate connection, and an inner diffusion connection, said outer diffusion connection of said p-type transistor network being connected to said first dedicated logic terminal, and said first network gate connection of said p-type transistor network being connected to said first logic input; and
 - a second logic block comprising:
 - an n-type transistor network implementing logic function complementary to said predetermined logic function, said n-type transistor network comprising a plurality of n-type transistors, and having an outer diffusion connection, a first network gate connection, and an inner diffusion connection, said outer diffusion connection of said n-type transistor network being connected to said second dedicated logic terminal, and said first network gate connection of said n-type transistor network being connected to said second logic input;
 - said inner diffusion connections of said p-type transistor network and of said n-type transistor network being connected to form a common diffusion logic terminal, wherein said outer diffusion connection of said p-type transistor network and said outer diffusion connection of said n-type transistor network are separately configured, such that said p-type transistor network and said n-type transistor network share a single common diffusion logic terminal.

Support for the above amendments is found, *inter alia*, in Fig. 1 of the instant specification. Fig. 1 shows two *separate* outer diffusion outer diffusion connections (181 and 191), and a *single common inner diffusion connection* (logic terminal 170 which is common to inner diffusion terminals 183 and 193).

Corresponding amendments are made to independent claim 33. Independent claim 33 teaches a logic circuit formed from multiple logic elements, each configured as in claim 1, and is likewise supported by Fig. 1.

The Applicant believes that independent claims 1 and 33, which include a single common diffusion logic terminal, are now clearly distinguished over Sako.

Claims Rejections Under 35 USC 102(b) – Keeth (US 5,917,758)

Claims are 55-56 rejected under 35 U.S.C. 102(b) as being anticipated by Keeth (US 5,917,758).

The Applicant respectfully acknowledges the Examiner's statement that claim 57 would be allowable if rewritten in independent form including all the limitations of the base claim. Accordingly, independent claim 55 is hereby amended to include the limitation that each of the logic terminals is separately configurable to serve as a logic output. Claim 57 is consequently canceled.

The Applicant believes that amended independent claim 55, which includes logic terminals which are separately configurable to serve as logic outputs, is now clearly distinguished over Keeth.

It is therefore submitted that independent claims 1, 33 and 55 are both novel and inventive over the cited prior art.

It is believed that dependent claims are allowable as being dependent on allowable main claims. The specific objections against the dependent claims are therefore not responded to individually.

No new matter has been added in the course of making the present amendments.

It is believed that all of the matters raised by the Examiner are overcome, and that all of the claims are both novel and inventive.

In view of the foregoing, it is believed this application is now in condition for allowance. An early Notice of Allowance is respectfully requested.

Respectfully submitted,



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Encl.:
Petition for Extension of Time (1 Month)